

Communicating Climate Risk Effectively? Editorial Coverage of Climate Change in Leading Urdu Language Newspapers (September 2018 to August 2021)

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Abstract

Introduction and Background: The climate action is one of the sustainable development goals of the United Nations and the media may play up or play down the effects and efficacy towards climate change but there is a need for the balance in coverage to achieve the goal for effective risk communication.

Problem Statement: There is limited research in context of coverage of climate change in the vernacular press like Urdu journalism and the study fills the gap. The studies which are conducted in context of Pakistan have focused on limited variables for analysis.

Aims and Objectives: The objectives of the study are to research climate change coverage in Urdu language newspapers of Pakistan.

Theoretical Framework: The theoretical framework comprises of triangulation for the Extended Parallel Process Model (EPPM) and framing theory.

Methodology: The method which is used for analyzing the contents of newspapers in quantitative content analysis to research 3 years of climate change coverage in the *Roznama Jang* and the *Roznama Express* from

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September 2018 to August 2021. The units of analysis are lead editorials and the sub-editorials.

Results/Findings: The study finds that there was limited editorial coverage of climate change in the Urdu language newspapers of the *Roznama Jang* and the *Roznama Express* (n = 88). The *Roznama Express* covered more editorials than the *Roznama Jang* but both the newspapers had editorial coverage in the sub-editorial section. There was no significant difference in both newspapers for the editorial coverage of the effects and the efficacy towards climate change. The *Roznama Express* seemed to provide balance by covering both the effects and the efficacy levels towards climate change which means that the newspaper had effectively communicated the risk of climate change.

Conclusion & Recommendations: The study concludes that the newspaper editorials did not focus on the impacts of climate change on public health and self-efficacy towards climate change and there is scarce coverage related to coverage of climate change specifically in the lead editorial section of newspaper which needs attention of editorial board or Urdu vernacular press. The editors of the newspapers will have to make climate change related news stories by keeping into consideration these missing frames to bring climate change on agenda for public engagement.

Keywords: Urdu language, newspapers, climate change, editorials, content analysis, framing, extended parallel process model, United Nations

Introduction

Scientists predict that climate change is going to stay with humans for the years to come (Hansen et al, 2022; Hansen et al., 1988, 2019). The Greta's climate movement is also highlighted by media as Greta Effect by international media (Laville, 2019). The research had explored the effect of exposure to Greta Thunberg on collective efficacy and intentions to engage in collective action (Sabherwal et al., 2021). It was found that young public figures like Greta may motivate collective action across the U.S. public and their effect is stronger among people with liberal ideology (Sabherwal et al., 2021). S. Hayes and O'Neill (2021) triangulated methods to analyze the images of UK newspapers and Getty images and had found shift in visual representation of climate protesters in UK media. S. Hayes and O'Neill (2021) explored that the face of climate protest in UK media in 2019-20 was of young females and the coverage of intergenerational justice had dominated climate protest imagery.

Industrialists during the industrial revolution focused on energy generation through carbon reservoirs that resulted in the making of harmful greenhouse gasses which had affected the Ozone layer (Kweku et al., 2018). The rays of sunshine directly hit the earth. Glaciers started melting, floods became the order of the day, people migrated, and rehabilitation activities increased (Ali, 2010). The governmental, and non-governmental organizations mobilized for climate action making climate change a disaster and doing the needful for the management of this catastrophe (Bajwa et al., 2020).

The sister organization of "The UN", the "*United Nations Framework Convention on Climate Change*," introduced an environmental treaty in 1992, at the "*Earth Summit*" in Rio de Janeiro, Brazil from 3 to 14 of June with the motives of doing further research, holding meetings, and policy-making to

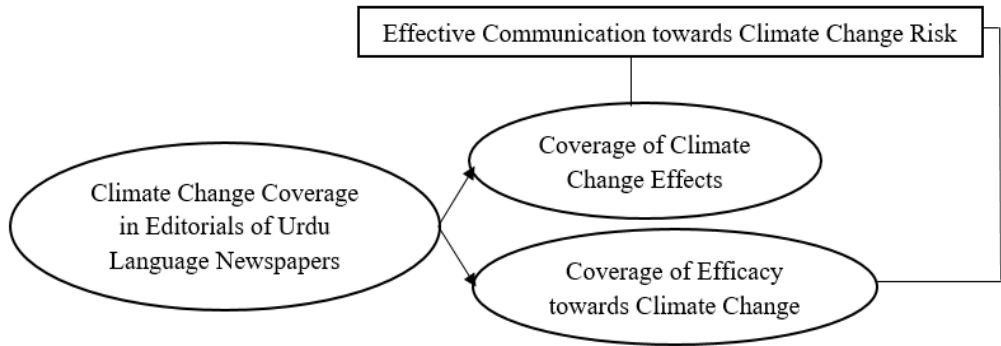
climate adaptation (Palmer, 1992). Many policy measures that were promised at the Rio conference had been dropped (Newell & Paterson, 1996).

Twenty-seven climate change conferences are held till 2022. These conferences are also known as the Conference of Parties (COP). The climatic events provide the media with the agenda of communicating the effects of climate change and efficacy toward climate change. The mass media may use the impacts and solutions frames with selectivity. The academicians will have to analyze how journalists provide balance to communicating risk of climate change by providing covering effects and efficacy frames.

The newspapers particularly are the classic examples of bringing the effects and solutions toward climate change on the agenda in the editorials. The editorial section of the newspapers is the place where the editors of the newspapers express their opinions about important issues and they reflect the point of view or policy of that newspaper toward certain issues. It is found from the previous research that the coverage of climate change is steadily increasing however the analysis of quality of coverage remains the gap to be fulfilled by the scholars. The previous research reviewed in Pakistan (Ali, 2010; M. Hussain et al., 2019; Khuhro, Adnan, Junejo, et al., 2020; Khuhro, Adnan, Khan, Junejo, et al., 2020; Volkmer & Sharif, 2018) have not covered the effects and efficacy frames in the context of Extended Parallel Process Model (Bolsen & Shapiro, 2018; Feldman et al., 2015; Hart & Feldman, 2014). It is therefore the research question is, **RQ**. Which newspaper between the *Roznama Jang* and the *Roznama Express* is more likely to cover the effects and efficacy of climate change in editorials for effective risk communication in the context of climate change?

Figure 1

Proposed Model for Editorial Coverage in Leading Urdu Newspapers for Frames of Impacts and Efficacy towards Climate Change



Literature Review

The literature review section reviews the research about agendas of climate change conferences, coverage of climate change in international, coverage in national Pakistani dailies and also identifies the gap. The literature review helped design a theoretical framework and methodology.

The initiative in the last decade of the twentieth century in context of environmental negotiations proved corner stone for the future conferences on climate change. The earth summit at Rio and many of its agreements failed to raise the level of binding international legal obligations under international environmental law, and the summit was not successful to protect the environment against known climatic threats (Palmer, 1992).

The United Nations’ climate change conferences are also known as Conference of Parties (COPs) and each meeting had some specific agendas to achieve. The COP1 had the major task of analyzing whether further targets for the stabilization or reduction of carbon dioxide or other greenhouse gasses going

beyond the year 2000 were necessary, and what new target ought to be achieved (Arts & Rudig, 1995). The industrialized countries had committed to returning carbon dioxide emissions on the level of 1990 by the year 2000 (Arts & Rudig, 1995).

The parties in COP2 agreed to Berlin Mandate and had proposed a 10 percent reduction in carbon dioxide (CO₂) emissions of industrialized countries from their 1990 levels by 2005, 15 to 20 percent reductions by 2010, however the target of AOSIS was 20 percent reduction in 1990 level CO₂ emissions by the year 2005 (Newell & Paterson, 1996). Over 160 parties adopted the Kyoto Protocol, in COP3, which for the first time had established legally binding limits for industrialized countries on emissions of greenhouse gasses (Breidenich et al., 1998).

At the end of COP4, Buenos Aires Action Plan was adopted and the parties demonstrated their will to reach substantial progress on the questions of financial mechanisms, development and transfer of technologies among nations and in that way the climate change had come on political agenda (Rentz, 1999). The COP5 in Bonn stimulated ratification of the Kyoto Protocol and had offered constructive incentives to developing countries to enhance their active participation in the climate agenda in the context of their sustainable development (Guerreiro, 1999). COP-6 was not in a position to wind up the negotiations on the issues left over from Kyoto (Khor, 2013). U.S. withdrew from COP7 but 178 countries agreed upon a text that would allow developed countries to move forward with the ratification of the Kyoto Protocol (Vespa, 2002). In COP-8, India rejected pressure on poor nations to make efforts to tackle global warming by cutting down greenhouse gasses emissions (Saryal, 2018). COP-9 turned to be a development and funding

conference, many negotiations about adaptation to climate change took place (Dessai et al., 2004).

Russia completed its ratification of the Kyoto Protocol in COP-10, which was the last one needed for the agreement to enter into force (Ott et al., 2005). COP-11 was significant because it served as the first meeting of the Parties to the Kyoto Protocol (Vihersalo, 2008). COP-12 made progress on important issues for developing countries such as vulnerability and adaptation to climate change and the Clean development Mechanism (Sterk et al., 2010). COP-13 main task described an agenda for minimizing greenhouse emissions however U.S. president had rejected the Protocol although Clinton-Gore administration had agreed it in 1997 (Christoff, 2008).

COP-14's agenda was to investment in the form of Poznan strategic program on technology transfer (Lovett et al., 2009). Disenfranchisement in the context of public participation for climate change is defined as being deprived of the capability to participate and to influence agenda-setting and decision making and it was argued that COP-15 (Fisher, 2010). COP-15 was intended to mark the end of the struggle to find a successor agreement to the Kyoto Protocol (Parker et al., 2012). COP-16 adopted Cancun Agreements as official decisions and the Mexican government successfully chaired the negotiations with excellent agenda management and process management capability which the Danish government lacked (Park, 2016).

COP-17 proved a breakthrough in international efforts to combat climate change because in Durban, governments had agreed upon to continuation of the Kyoto Protocol with a second round of quantified mitigation commitments to be defined for a subset of Annex I countries (Moncel, 2012). COP-18 showed low levels of commitments by the developed countries in emission cuts

and provision of climate finance for developing nations (Khor, 2013). The agenda of COP-19 consisted of institutional arrangements to address climate change disaster, and a proposal to address decision making in the UNFCCC process put forward by the Russian Federation (Savaresi, 2013). COP-20 brought together key decision-makers and representatives from over 190 countries to share information and ideas, and draft an agreement on steps manage and fund efforts for climate change mitigation (Siña et al., 2016). COP-21 became successful in adoption of Paris Agreement, a legal binding treaty on climate action containing emission reduction commitments from 187 countries (Roberts, 2016). During COP-22, the Global Environment Fund (GEF) announced a capacity-building initiative for transparency supported by 11 developed countries donors up to \$50 million (Ghezloun et al., 2017). COP-23 paid special attention to support the countries of Global South in their efforts to reduce emissions, adapt to climate change and deal with the climate disaster (Obergassel et al., 2018).

In COP-24, Poland communicated with advanced countries that for sharing responsibility for cutting emissions (Asadnabizadeh, 2019). COP-25 in Spain failed to meet the increasing public demand for swift and strong climate action and in its formal mandate to finalize the Paris Agreement (Obergassel et al., 2020). COP-26 aimed to deliver net zero by 2050 through Nationally Determined Contributions or also known as NDCs (Ares, 2021).

The American newspapers and television did not provide a balance in coverage in the context of anthropogenic contributions to global warming and actions toward climate change in media (Boykoff & Boykoff, 2004, 2007). It was found by Boykoff and Boykoff (2004) that the Wall Street Journal, the Los Angeles Times, the Washington Post, and the New York Times were divergent

of popular discourse from the scientific discourse communicated by IPCC about the anthropogenic activities and urgency for actions toward climate change.

Nisbet (2009) highlighted the significance of news frames for public engagement in the U.S. and argued that the typology of frames applicable to climate change includes matters of expert understanding or consensus; a talk on what is known or not known, peer-reviewed confirmed knowledge and alarmism. The comparison was made between two newspapers in the context of climate change coverage. The Dutch and French newspapers used the frames of consequences, and responsibility frequently and with less emphasis on conflict and human interest frames in climate change conferences (Dirikx & Gelders, 2010).

The frames of the threat of climate change and the efficacy toward climate change were analyzed in U.S. dailies by using the Extended Parallel Process Model and framing, and it was found the frames were used separately by the newspapers (Feldman et al., 2015). The climate change frames ensure public engagement but there is a polarization of frames in the U.S. context which include the consequences and efficacy (Bolsen & Shapiro, 2018).

The coverage of climate change in news media was analyzed in 10 countries for 13 years, and it was found that the global north had provided more coverage than the global south, but the global south had emphasized the effects of climate change (Hase et al., 2021).

Media in Pakistan can be broadly categorized into Urdu media and English media, the former media are consumed by both rural and urban populations but the audience of English media is limited to the Urban population (Volkmer &

Sharif, 2018). There are four main media groups in Pakistan Jang (moderate liberal), Nawa-i-Waqt (conservative), Dawn (liberal), and Lakson (moderate liberal) (Volkmer & Sharif, 2018).

Ali (2010) found that Dawn gave more coverage when compared with The News International and the descriptive statistics revealed that both the newspapers had relied on foreign news sources and political actors for the coverage. Ali (2014) content analyzed the visual representation of climate change and found that the female gender was represented as a helpless victim in the Dawn and The News International. M. Hussain et al. (2019) explored the coverage of climate change of COP21 and found that the daily Dawn had triple coverage of climate change than daily Jang, however, the daily Jang had emphasized on the national political system. Khuhro, Adnan, Khan, & Asghar (2020) analyzed the diversity of news sources in climate change reporting of five climatic events and found that elite sources were preferred by the newspapers. Khuhro, Adnan, Junejo, et al. (2020) interviewed environmental journalists in Pakistan and revealed that government advertisers in comparison to corporations have more impact on climate change content because it is soft news and needs more investment. Javed et al. (2020) researched the newspapers' portrayal of climate change and found that the newspapers covered three issues of climate change and global warming, water scarcity, and flood in Pakistan.

S. Hussain et al. (2022) interviewed the journalists and found that there was a lack of interest in news media journalists in climate change coverage and the journalists suggested that climate news in Pakistan needs to beat reporters and more socially responsible role to highlight the enormity of the situation in the context of climate change. The editorial coverage of climate change was

explored in the English language newspaper of the Dawn and the Urdu language newspaper of the Roznama Jang for two years from 2018 to 2019; it was found that the Roznama Jang had covered more environmental issues than the Dawn (Barri & Shahzad, 2022). The impact of climate change is visible in almost every geographical region of Pakistan but it is a less investigated country in the context of climate change in South Asia and research is needed in the vernacular press like Urdu newspapers or local language newspapers in Pakistan (Volkmer & Sharif, 2018).

The current study is different from the previous studies because the study included the Urdu language newspapers especially the Roznama Express was not utilized for analysis in the previously reviewed studies, secondly the frames have been utilized in the context of Pakistan demonstrate the polarized finding. Further, the current study synthesizes the findings by applying the Extended Parallel Process Model (EPPM) by extending studies of Bolsen & Shapiro (2018) and Feldman et al. (2015).

Theoretical Framework

The theoretical framework comprises the theories of agenda setting and extended parallel process model. The process of media effects was conceptualized by Cohen (1963) as media most of the time tells people not to think but to think about, and this process, later, was known as agenda-setting theory (Baran & Davis, 2015). McCombs & Shaw (1972) empirically verified this concept by Cohen (1963), and gave the process the name of agenda-setting effect by analyzing the voters' behavior in political campaigns. McCombs and Shaw (1972) believe that editors play a vital role in shaping political reality.

The second step of agenda setting is framing which states that people use sets of expectations to make sense of their social world and mass media contribute to these sets of expectations (Baran & Davis, 2015). News media provide salience to events by discussing the definition, causal interpretation, moral evaluation, and recommendations (Entman, 1993). These four dimensions of framing are further elaborated into more frames in the context of climate change by Feldman et al. (2015) and Bolsen and Shapiro (2018).

Bolsen and Shapiro (2018) discuss the polarized frames of effects and efficacy of climate change but Feldman et al. (2015) synthesize the findings by combining the framing theory with the Extended Parallel Process Model introduced by Witte (1992). The Extended Parallel Process Model (EPPM) explains the process of effective risk communication and argues that effective risk communication covers both aspects of threat and ways to reduce these threats (Feldman et al., 2015; Witte, 1992).

The current study of editorial coverage in the Urdu language newspapers is related to the framing of effects and efficacy towards climate change which explores the balance for effects of climate change and the efficacy towards climate change to effectively communicate the risk of climate change in Urdu language press. It is in this context, it is hypothesized that the Urdu language newspapers are likely to significantly affect the coverage of effects of climate change and efficacy towards climate change to effectively communicate the risk of climate change.

H. The *Roznama Jang* in comparison to the *Roznama Express* is more likely to effectively communicate the risk of climate change.

Methodology

The post-positivist philosophical approach is utilized for designing methodology. The inter-subjective agreement between the writers for analyzing the news stories is assured for confidence in findings. Further, the design of the study is connected to the recent literature in context of climate change. The help was also taken from Lauren Feldman who is Associate Professor of Journalism and Media Studies at Rutgers School of Communication and Information in the United States of America in interpersonal communication through email for conceptualization and operationalization of measures. The findings from Pakistani cultural journalistic practices are compared with the American journalism to argue in the research community working on framing of climate change in newspapers.

The quantitative content analysis is used to analyze the content. The units of analysis are lead editorials and the sub-editorials. The Urdu language newspapers of the *Roznama Jang* and the *Roznama Express* are among the top newspapers of Pakistan in terms of their online traffic and sharing in blogs (Pahore, Memon, & Khan, 2021; Pahore, Memon, Hamid, et al., 2021), it is in this context the universe for the study is the editorials with the subject of climate change published in the newspapers of the *Roznama (daily) Jang* and the *Roznama (daily) Express* for three (03) years from September 2018 to August 2021. A number of editorials identified in these two newspapers were 88 from September 2018 to August 2021 and because of this limited sample, further sampling of content was not done and census was considered for analysis.

The selected time period is important because it is the political regime (time period) of the then Prime Minister (PM) of Pakistan, Mr. Imran Khan,

who had initiated the Clean and Green Pakistan movement and he highlighted the significance of climate change in his speeches. Pakistan also hosted World Environmental Day during this time period. The units of analysis for the study are lead editorials and the sub-editorials. The climate change conferences COP24 and COP25 were also held during this time period. The units of analysis for the study are lead editorials or editorials which appear first and the sub-editorial which follows the lead editorials published on the editorial pages of Urdu language newspapers.

Table 1 Description of Variables		
Variables	Conceptualization	Operationalization
Coverage in Urdu language newspapers (Independent Variable)	The coverage in Urdu language newspapers is conceptualized as the extent to which the newspapers of the <i>Roznama Jang</i> and the <i>Roznama Express</i> cover the issue of climate change in the genres of lead editorials and the sub-editorials	The independent and the dependent variables are operationalized on 2-point nominal scale, "1 = Absent;" and "2 = Present."
Yearly coverage (Dependent Variable)	The yearly coverage is conceptualized as the extent to which the newspapers cover the issue of climate change from September 2018 to August 2021 which is a time period of three years in lead and sub-editorials	
Effects of climate change on environment (Dependent variable)	The effects of climate change on environment are conceptualized as the extent to which the editorials and the sub-editorials in Urdu language newspapers cover the effects of climate change on the environment like air pollution, flooding, extinction of species, and droughts	
Effects of climate change on human security (Dependent variable)	The effects of climate change on human security are conceptualized as the extent to which Urdu language newspapers cover the effects of climate change on national security issues like energy crisis, water crisis, food crisis or migration because of climate change in lead versus sub-editorials	
Effects of climate change on public health (Dependent Variable)	The effects of climate change on public health are conceptualized as the extent to which the newspapers cover the effects of climate change on public health in the shape of malnutrition, asthma, or dengue in lead and sub-editorials	
Self-efficacy towards climate change (Dependent Variable)	The coverage of self-efficacy towards climate change is conceptualized as the extent to which the Urdu language newspapers cover the individual actions for taking actions towards climate change	
External efficacy towards climate change (Dependent Variable)	The coverage of external-efficacy is conceptualized as the extent to which the Urdu language newspapers in Pakistan attribute the responsibility of climate action to politicians or industrialists in lead versus sub-editorials	
Response efficacy towards climate change (Dependent Variable)	The coverage of response efficacy towards climate change is conceptualized as the extent to which Urdu language newspapers cover the ordinances and policy making in context of climate change in lead and sub-editorials	

The data was coded on SPSS version 25. Two coders from MPhil Mass Communication were trained to code the data in the SPSS data view by providing the coding sheet in variable view. The study is externally valid because it compared the effects and efficacy frames in context of climate change coverage in news media in America (Bolsen & Shapiro, 2018; Feldman et al., 2015; Feldman & Hart, 2018) with the coverage of climate change in Pakistan. The guidelines from the previous research (Feldman & Hart, 2018; A. F. Hayes & Krippendorff, 2007; Krippendorff, 2004) are extended for determining the inter-coder reliability and 25% of the sample was selected that was 22 editorials, and 11 articles were selected from each newspaper. The coders were the first two authors of this research article. The Krippendorff's Alpha values for all the dependent variables had ranged between 0.891 and 0.901 which were acceptable.

The data was analyzed by using Chi-square test of independence to explain the effects to explore difference if any. The criterion was to analyze the difference in yearly coverage, difference in coverage of effects versus efficacy and the difference individual dimensions (attributes of variables) of effects and efficacy coverage. The graphs are used to illustrate tables in a more comprehensible and compact manner.

Results

The study had explored the research question whether the Urdu language newspapers provided the balanced coverage by providing both the aspects of effects of climate change and efficacy towards climate change and whether there was difference in each of the newspapers for such coverage. The total number of editorials covered in both newspapers were eighty eight ($n =$

88). The cross-tabulations elaborate the difference in percentages in context of the attributes of the dependent variables.

Table 2

Yearly Difference in Editorial Coverage in the Roznama Jang and the Roznama Express

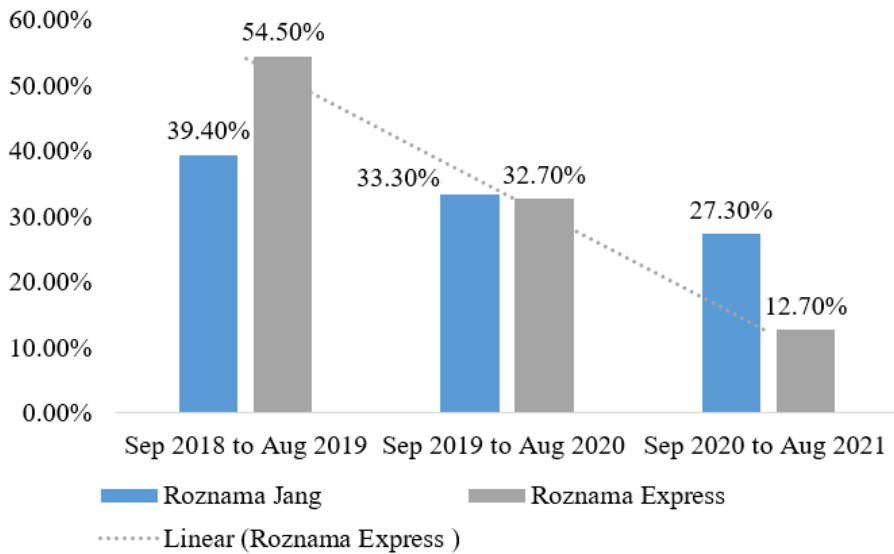
			Year			
			Sep 2018	Sep 2019	Sep 2020	Total
			Aug 2019	Aug 2020	Aug 2021	
			(Year 1)	(Year 2)	(Year 3)	
Editorial Coverage of climate change in leading Urdu language newspapers	Jang	Count	13	11	9	33
		% within coverage	39.4%	33.3%	27.3%	100.0%
		% within Year	30.2%	37.9%	56.3%	37.5%
		% of Total	14.8%	12.5%	10.2%	37.5%
	Express	Count	30	18	7	55
		% within coverage	54.5%	32.7%	12.7%	100.0%
		% within Year	69.8%	62.1%	43.8%	62.5%
		% of Total	34.1%	20.5%	8.0%	62.5%
	Total	Count	43	29	16	88
		% within coverage	48.9%	33.0%	18.2%	100.0%
	% within Year	100.0%	100.0%	100.0%	100.0%	
	% of Total	48.9%	33.0%	18.2%	100.0%	

There were no significant associations (the significance value was greater than 5) of the editorial coverage in newspapers with the dependent

variables which means that there were no effects and no significant differences found. However, the editorial coverage in the Urdu language newspapers of the *Roznama Jang* and the *Roznama Express* was analyzed and the cross-tabulation had explored that the *Roznama Express* (62.5%) had more editorial coverage than the *Roznama Jang* (37.5%).

Figure 2

Editorial Coverage in the Roznama Jang and the Roznama Express



There is declining trend in the editorial coverage of climate change in *Roznama Jang* and the *Roznama Express* from September 2018 towards August 2021. The *Roznama Express* had the most coverage from September 2019 to August 2019 but the huge declining difference was observed towards 2020 and 2021 respectively that is elaborated with the help of dotted line (see Figure 2).

Table 3

Coverage of Climate Change in Lead and Sub Editorials in the Roznama Jang and the Roznama Express

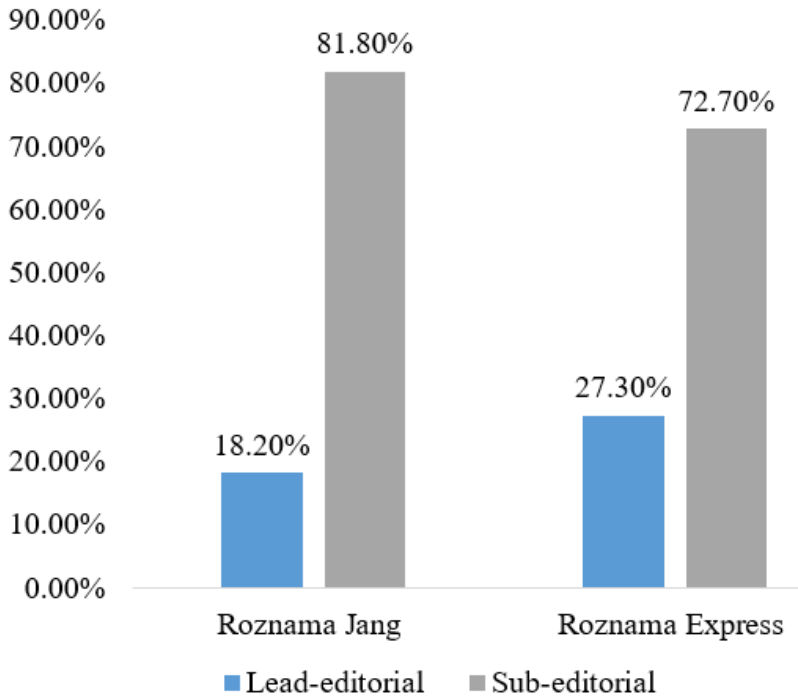
			Salience		
			Lead	Sub	
			editorial	editorial	Total
Editorial	Jang	Count	6	27	33
Coverage		% within coverage	18.2%	81.8%	100.0%
		% within salience	28.6%	40.3%	37.5%
		% of Total	6.8%	30.7%	37.5%
	Express	Count	15	40	55
		% within coverage	27.3%	72.7%	100.0%
		% within salience	71.4%	59.7%	62.5%
		% of Total	17.0%	45.5%	62.5%
Total		Count	21	67	88
		% within coverage	23.9%	76.1%	100.0%
		% within salience	100.0%	100.0%	100.0%
		% of Total	23.9%	76.1%	100.0%

The Urdu language newspapers covered the issue of climate change more in sub-editorial section (76.1%) than the lead editorial section (23.9%) which had

implied that the climate change was not on the agenda of the editors of the *Roznama Jang* and the *Roznama Express*.

Figure 3

Climate Change Coverage in Lead-editorials and Sub-editorials



The editors of Urdu language newspapers selected the genre of sub-editorials with emphasis to cover climate change (see Figure 3) but the less emphasis was laid upon on lead editorials.

Table 4

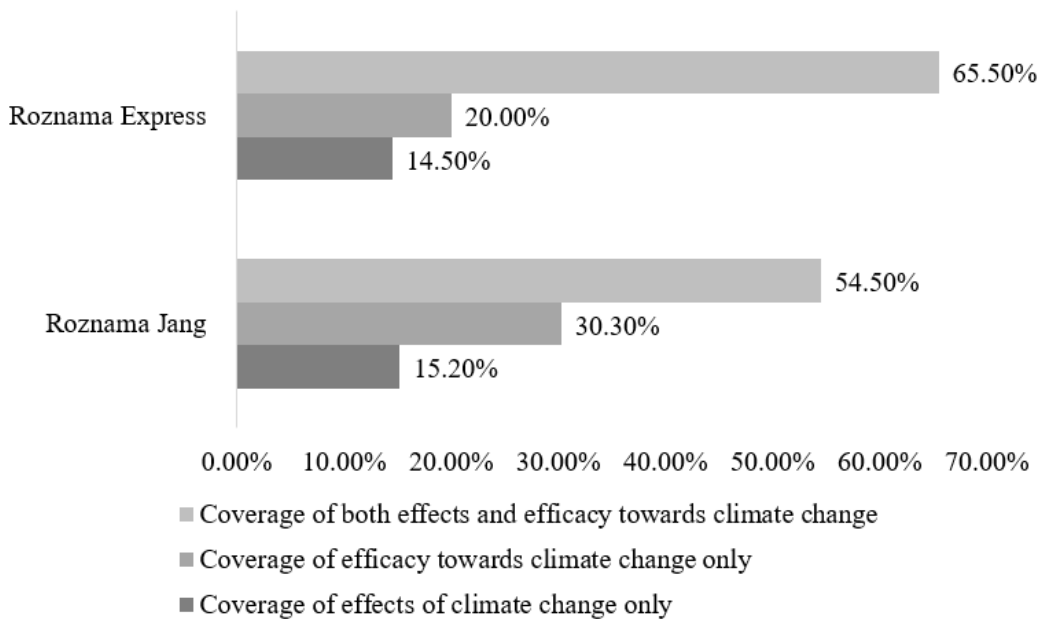
Comparison of the Roznama Jang and the Roznama Express for Communicating Risk of Climate Change

			Coverage of Effects and Efficacy towards Climate Change			
			Coverage of climate change only	Coverage of effects towards climate change only	Coverage of both effects and efficacy towards climate change	Total
Editorial coverage of climate change	Jang	Count	5	10	18	33
		% within coverage	15.2%	30.3%	54.5%	100.0%
	% within effects and efficacy	38.5%	47.6%	33.3%	37.5%	
	% of Total	5.7%	11.4%	20.5%	37.5%	
Express		Count	8	11	36	55
		% within coverage	14.5%	20.0%	65.5%	100.0%
	% within effects and efficacy	61.5%	52.4%	66.7%	62.5%	
	% of Total	9.1%	12.5%	40.9%	62.5%	
Total		Count	13	21	54	88
		% within coverage	14.8%	23.9%	61.4%	100.0%
	% within effects and efficacy	100.0%	100.0%	100.0%	100.0%	
	% of Total	14.8%	23.9%	61.4%	100.0%	

To effectively communicating the risk of climate change the journalists have to focus on both the meta-frames of effects and the efficacy towards climate change. It was found that the *Roznama Express* (65.5%) comparatively had emphasized these both meta-frames.

Figure 4

Comparison between the Roznama Jang and the Roznama Express in Terms of Covering Effects and Efficacy towards Climate Change



The *Roznama Express* (14.50%) and the *Roznama Jang* (15.20%) have the identical coverage in context of effects of climate change. The *Roznama Jang* (30.30%) covered the efficacy towards climate change more than the *Roznama Express* (20%). But, the *Roznama Express* (65.50%) seemed effectively communicating the risk of climate change than the *Roznama Jang* (54.50%) by covering both the effects and efficacy towards climate change (see Figure 4).

Table 5

Polarization of Effects and Efficacy towards Climate Change in Roznama Jang and the Roznama Express

Coverage of Effects and Efficacy																		
N	Coverage of Effects of Climate Change									Coverage of Efficacy towards Climate Change								
	Environm ent			Human Security			Public Health			Self- Efficacy			External- Efficacy			Response -Efficacy		
	A	P	T	A	P	T	A	P	T	A	P	T	A	P	T	A	P	T
J	16	1	3	1	1	3	3	2	3	3	1	3	1	2	3	2	1	3
		7	3	8	5	3	1		3	2		3	2	1	3	1	2	3
	48	5	1	5	4	1	9	6	1	9	3	1	3	6	1	6	3	1
	.5	1.	0	4.	5.	0	3.	.	0	7.	.	0	6.	3.	0	3.	6.	0
	%	5	0	5	5	0	9	1	0	0	0	0	4	6	0	6	4	0
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
E	19	3	5	3	2	5	5	4	5	5	1	5	2	3	5	2	2	5
		6	5	0	5	5	1		5	4		5	0	5	5	7	8	5
	34	6	1	5	4	1	9	7	1	9	1	1	3	6	1	4	5	1
	.5	5.	0	4.	5.	0	2.	.	0	8.	.	0	6.	3.	0	9.	0.	0
	%	5	0	5	5	0	7	3	0	2	8	0	4	6	0	1	9	0
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

N = Newspaper

J = Roznama Jang

E = Roznama Express

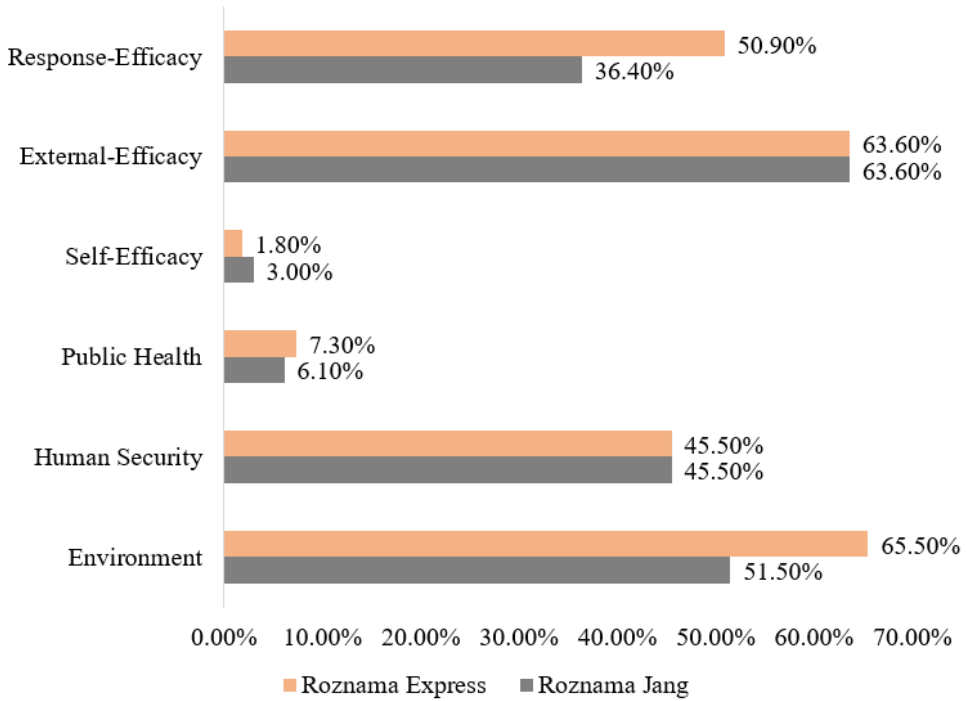
A = Absent

P = Present

T = Total

Figure 5

Polarization of Frames in the Roznama Express and the Roznama Jang



Discussion

The results of the study were consistent with the findings of Feldman and Hart (2018) who had argued that there was a polarization of frames in American newspapers.. Although the study is different from previous study (Feldman & Sol Hart, 2018) because the current study had only focused on Urdu language newspapers to bridge gap. Among effects, the effects on environment were more visible in the editorial coverage of the *Roznama Express* (65.50%) and the *Roznama Jang* (51.50%). The editorial coverage of the impacts (effects) of climate change (CC) on human security were also consistent in the *Roznama Express* (45.50%), and the *Roznama Jang* (45.50%).

The editorial coverage contextualizing effects or impacts of climate change (CC) on health of people was scarce in both the newspapers of the *Roznama (Daily) Jang* (6.10%) and the *Roznama (Daily) Express* (7.30%). The external efficacy is the attribution of responsibility towards politicians and industrialists. The external efficacy was covered by both the newspapers of *Roznama Express* (63.30%) and the *Roznama Jang* (63.30%). The response efficacy is the extent to which newspapers cover the policy making context of climate change. The editorial coverage in context of response efficacy was more visible in the *Roznama Express* (50.90%) than in the *Roznama Jang* (36.40%). The self-efficacy is that the individuals' actions can make difference for climate action. However, there was limited coverage in relation to self-efficacy towards climate change in both the newspapers of the *Roznama Express* (1.80%) and the *Roznama Jang* (3.0%).

It was hypothesized that the *Roznama Jang* in comparison to the *Roznama Express* would more likely to effectively communicate the risk of climate change by covering both the meta-frames of effects of climate change and efficacy towards climate change. But, in contrary to that prediction, it was explored that the *Roznama Express* had communicated the risk of climate change more effectively.

However, the newspapers had not focused on effects of climate change on health of people (public) and “self-efficacy frame” or the individual action taken for climate action. There was scarce coverage particularly in context of these two specific frames. Further, the editors of the newspapers had opted sub-editorial section for the coverage of climate change. Considering these points found from this research, it is recommended that the newspaper editors will have to make opinion more valid and appealing by adding effects of climate

change on public health. They will also have to narrate examples of local individuals in context of Pakistan to bring the climate change on the agenda of the public. The editors of the Urdu language newspapers can only bring climate change on the agenda of public when they will start covering it in lead editorials.

Conclusion

The study concludes that the Urdu language newspapers will have to include the discourses of effects or the impacts of climate change (CC) affecting health of people in Pakistan, and the “self-efficacy agenda” or the individual oriented action for climate action. The interpretational newspapers in U.S. have covered these aspects as identified by Feldman & Sol Hart (2018) and newspapers of America can be examples for the editorial board of Pakistan to make effective editorial decisions for writing editorials in the editorial section of leading Urdu language newspapers. There is also a huge gap in the lead-editorial section, if the editors of the newspapers want to bring the agenda of climate change on public agenda then they will have to use this section to show seriousness towards the severity and risk of climate change. In short, the newspapers will have to provide balance by covering both the impacts of climate change and the solutions towards climatic action to challenge the dominant discourses of political transition and corruption.

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